Annual Variation in the Location of Stream Origins in Eastern and Southern Washington

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Stream origins were located in 1998 and 2001 in eastern, southcentral, and southwestern Washington. In 1998, 149 streams were sampled to inform the Forest and Fish negotiations. In 2001, 119 of those streams were revisited and at 43 details on flow and channel characteristics were also collected as part of a pilot study. The detailed sampling allowed for the classification of origins as perennial initiation points (PIP) or spatially intermittent initiation points (SIIP). 2001 started out as a drought water year and it was hypothesized that stream origins would move downhill relative to 1998 locations. Ninety-two percent of origins moved, with 72% of movements up slope in 2001. Origin movements ranged from 6 – 822 m. Movements were greatest for SIIPs except in eastern Washington. Rainfall at nearby National Oceanic and Atmospheric Administration stations from June-September 2001 was 24% - 165% greater than the same period in 1998. Stream origins, when sampled during the low flow period, appear to be influenced more by immediate, short-term, pre-sampling rainfall events than longer term precipitation trends.

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